EXPANDING THE MARKET: EXCAVATION OF THE MEDIEVAL BOROUGH BOUNDARY AND BURGAGE PLOTS AT SUMMERHOUSE HILL, BUCKINGHAM

ANTONI NOWAK AND OLIVER RUSK

With contributions from Paul Blinkhorn, Mhairi Hastie, Christina Hills and Jennifer Thoms

In 2015, CFA Archaeology Ltd undertook an excavation on land at Summerhouse Hill, Buckingham, which uncovered and dated the medieval borough boundary ditch to the early Norman period. The ditch formed the northern edge of a sequence of sand quarries. These had been backfilled and burgage plots laid out within the borough boundary. Rear-of-property activity within these plots was indicated by rubbish pits cut into the fills during the later medieval period. Some of these pits yielded evidence of small-scale industrial crafts, such as leatherworking. The borough boundary was later realigned, probably by Lord Cobham in the early 18th century during works to create a private pleasure garden.

Introduction

An archaeological excavation and watching brief was carried out by CFA Archaeology Ltd (CFA) in February and March 2015, on land at Summerhouse Hill, Buckingham, in the civil parish of Buckingham (NGR: SP 69490 34110) in advance of a residential development. The site was situated between the Old Chantry Chapel and Cobham Close, on an area of former houses and gardens, now overgrown (Fig. 1).

The programme of works was aimed at discerning the phasing and nature of activity in this area of the town, addressing changing patterns of land use from the early medieval to post-medieval period.

The Site

The development site lay to the north of Market Hill, to the north of the historic core of Buckingham. The ground varied in height between 95m and 100m AOD on a south-facing slope. The area was bounded to the west by parkland and trees, to the south by existing properties and areas of former garages, and to the north and east by existing residential properties.

The site was subject to a topographical survey and trial trench evaluation by Network Archaeology Ltd in 2009 (Thorpe 2009). These investigations revealed a large number of pits dating from the 13th to 19th centuries along with a small quantity of 11th-century pottery. Evidence of possible medieval sand quarrying and craft activity was also noted, with pit refuse containing evidence of ironworking and horn/antler work, as well as imported saltwater fish remains. Post-medieval features relating to ornamental gardens were recorded within the southern half of the site, along with an undated well and a pair of possible column bases within the northern half of the site. Stone footings were also found below the 18th-century summerhouse which were thought to represent an earlier structure (Thorpe 2009).

Recent nearby archaeological investigations are noted in the Buckinghamshire County Council Historic Environment Record (HER) at Bryant Court to the east, and on the other side of Moreton Road, revealing post-medieval pits and a ditch thought to represent a property boundary.

Historical Background

The county town of Buckingham dates from the 10th century and was based on two late Saxon

FIGURE 1 Site location and plan of features

burhs built by Edward the Elder, King of Wessex, in 913 to oppose the Vikings based in Northampton, although an earlier date is argued (Beckley & Green 2008, Haslam 2005). A mint was based in Buckingham by 975, from which coins of Ethelred and Cnut survive, and a minster church was established, yet the present church dates from the 18th century. Buckingham is mentioned in Domesday and a castle was built by the Giffards shortly after the Norman Conquest. It was never occupied: throughout the medieval period there are records of repairs, but by the 1640s it was ruinous. The new parish church was built on Castle Hill in 1777–81 and removed all visible trace of the castle. By 1218 there was rivalry with Aylesbury, which is positioned more centrally within the county, and the fortunes of Buckingham waxed and waned. In the early 14th century the town was affected by famine and was empty even before the Black Death. Queen Mary granted the town status as a self-governing borough and these rights were reissued, and paid for, under Charles II and James II. It was only after the 16th century that the town regularly sent Members to sit in Parliament.

In the 17th century, the formation of up to 40 trade guilds and construction of a new town hall indicate the prosperity of the town. However, the great fire of 1725 destroyed 135 of the 387 houses, although it did not reach Market Hill. In 1748, Lord Cobham built the new gaol to allow assizes to be held. The town was only connected to the canal system in 1801 and the railway network in 1850 by spur lines, so economic growth largely bypassed the town in the 19th century. Like many market towns there was trade in hides and wool; there was also an iron foundry. Buckingham was famous for lace and briefly for locally quarried marble. Pevsner and Williamson (1994) consider that the market place may have been a larger triangular space in front of the Town Hall and that islands of buildings, such as the Old Gaol, have intruded into this space. As the fire of 1725 did not quite reach the market, there are 16th and 17th-century buildings with Georgian fronts in these streets.

The Old Chantry, alternatively the Old Latin School, to the south of the site on Market Hill is a 12th-century chapel with a Norman door. The chantry chapel belonged to the Hospital of St John Acon in London, hence its dedication. In 1552, during the Reformation, the building became a school under Edward VI. It was restored in 1857 and 1875 (latterly by Gilbert Scott), and used as a school until 1907; in 1912 it was gifted to the National Trust. The summerhouse within the north part of the site is Grade II listed. It was probably built by Lord Cobham in the late 18th century for his private garden to the rear of the *Cobham Arms*, a coaching inn which was owned either by the Stowe Estate (pers. comm. R Wheeler, National Trust garden historian), or by his immediate heirs in the Temple-Grenville family.

The Excavation

An area of 930m² was excavated within the development site, targeting trenches from the 2009 evaluation.

The natural geology was a mixture of yellow-orange sand and gravel with patches of yellow sand in places and was recorded at a height of 94.4m AOD at the northern end of the excavation area, and 91.95m AOD towards the southern end. Overlying this was a layer of buried topsoil which ranged in thickness from 0.2-0.5m. The presence of re-deposited natural sand and gravels in places was indicative of recent terracing and landscaping of the area. This material was sealed by topsoil, which varied from 0.2-0.4m thick across the site.

The areas of excavation and the phasing obtained from the pottery and ceramic tiles are shown in Figure 1. The watching brief extended further to the east and northeast, as shown in Figure 1, and recorded continuations of both the boundary ditch and quarry pit to the edge of the development area.

The Borough Boundary Ditch

A large ditch (170/2060), roughly aligned east-west, dominated the north of the excavation area. No archaeological features other than a tree-throw (115) lay to the north of this feature. The ditch was interpreted as the borough boundary, visible in the relict extents of the medieval urban layout from 19th-century Ordnance Survey maps. The feature continued to the west and east beyond the excavation area, and was also recorded during the watching brief.

The ditch itself was generally steep sided with a concave profile and varied in depth from 1.25m to 1.72m (Fig. 2). It measured 3.72m in width towards the centre, and up to 2.25m wide towards the west (Figs 3-4).

Pottery from its lowest fills dated to the years

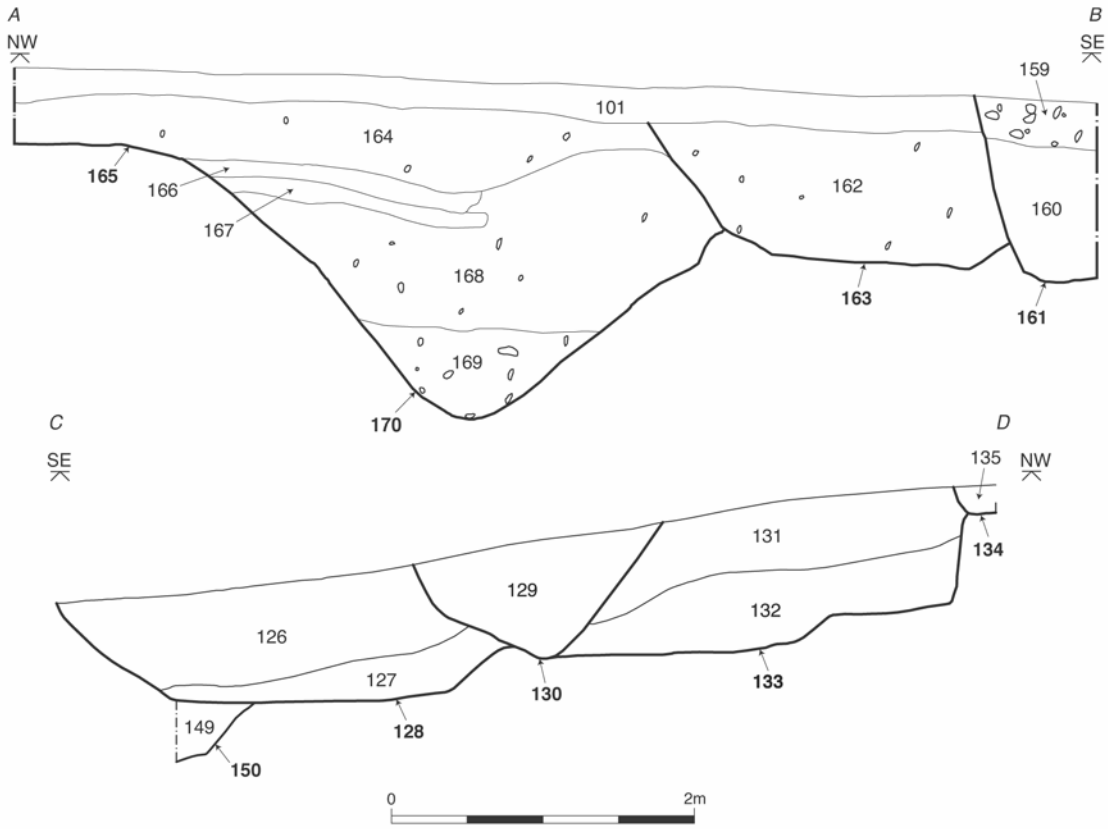

FIGURE 2 Sections

just after the Norman Conquest: these fills were sealed by a layer yielding pottery no later than AD 1100 to 1200 (see Blinkhorn, below), providing a *terminus post quem* for the initial silting-up of the ditch. Some initial basal deposition of material washed or dumped into the ditch was indicated by an assemblage of poorly preserved plant material and animal bone. The remainder of the profile was dominated by meat-bearing bone elements from a variety of domesticates, as well as goose and dog, indicating general refuse disposal. The fills were similar to the natural geology and this, along with the tightly grouped pottery assemblages recovered, suggests that it was not left open for long, despite persisting as a boundary. Pottery dating to the 13th and 14th centuries was recovered from the upper fills to the east. While small, the bone assemblage also provided evidence of horn removal from sheep and goat horn cores, alluding to industrial activity including tanning.

The Quarry Pit

A large quarry pit (150/2017, Fig. 1) was located on the southern edge of the excavation area. The pit measured in excess of 25m in length from east to west and 9.6m in width from north-south; it continued outside of the excavation area to the west, south, and east. Slots excavated through the quarry pit revealed steep sloping sides and a fairly flat base, although this was heavily truncated by a number of later pits (Fig. 5). Its depth varied from 1.2m to 1.4m towards the northern end of the feature, with excavations reaching a depth of at least 4.5m at the southern end.

The fills contained pottery dating to the 13th and 14th centuries, comprising single sherds from numerous vessels in apparent secondary deposition. A large quantity of animal bone included several well-preserved elements of a pony, advanced in age and potentially disposed of whole. The range of meat-bearing elements, from pig or

FIGURE 3 West-facing section of Ditch 170 and Pit 165

FIGURE 4 East-facing section of Ditch 170

FIGURE 5 East-facing section of Quarry Pit 150 and pits 146, 152 and 154

sheep of varying age, was contrasted by an abundance of cattle skull and foot bones. The atypical variety of species and non-meat components represented suggests that the pit had been used for localised dumping of waste from industry or primary butchery once quarrying activities had stopped. Expedient refuse disposal is also supported in the cereal assemblage, with fused wheat grains indicating discarding of spoilt grain. Earlier 12th and 13th-century pottery was recovered from the upper layers of the pit within the watching brief area to the east, suggesting re-deposition.

The Burgage Plots

The excavation uncovered the northern end of two adjacent burgage plots abutting the borough boundary, with the position of the burgage plot boundary fossilised within the existing boundary layout behind the properties fronting onto Market Hill (Fig. 1).

Only a small part of the western plot was excavated. It held three intercutting pits (161, 163 and 165), aligned NNW-SSE, lying parallel to and just west of the plot boundary, two of which (165, 163) cut the borough boundary ditch (170) (Fig. 2). A further two features were also recorded cutting the borough boundary ditch (180,185).

Within the eastern plot were a number of broadly sub-circular pits of differing sizes, arranged into three NNW-SSE orientated lines, lying parallel to and east of the plot boundary and interpreted as back plot refuse pits. From west to east the alignments were: pits 106, 110, 172, 175 and 178; pits 128, 130 133, 135 and 138; and pits 123, 125, 140 146, 152, 154, 156 and 158. These pits varied in date from the 13th to 17th century, based on the pottery recovered from the fills. The bone assemblage was largely indicative of domestic activity with the exception of the earlier pits.

13th to 14th century

To the north of the site in the eastern plot was a steep-sided pit (178) with a flat base measuring 1.34m in width by 1.52m in depth. Pottery from the two fills dated to the 13th to 14th century and was fragmented from secondary deposition. A potentially whole pig skeleton was deposited with no clear evidence of butchery. The remaining bone assemblage from cattle and sheep appeared to suggest domestic consumption. To the east of this lay a 0.48m-deep pit (123) measuring 1.94m across; the pottery it contained was similar to that in pit 178 and accompanied unidentifiable fragments of animal bone.

To the south of pit 178, a large steep-sided pit (175) measured 2.83m in width by 0.94m in depth.

The primary fill produced a substantial quantity of horn core, with the majority of cattle elements represented by skull fragments. The presence of at least five animals and several mature specimens with cut marks presented strong evidence of industrial processing for tanning or horn working. Pottery from the lower fill dated to the 14th century, while the upper fill contained jar and cup fragments dating to the late 16th century, arguably highlighting a change in activity by this later phase.

14th to 15th century

The southernmost pits in the south-west corner of the site lay to the south of quarry pit 150. Pit 110 (Fig. 1) measured 2.25m in width by 0.15m in depth and contained scarce pottery dating from the 14th to late 15th century. A similarly sparse faunal assemblage comprised food waste from sheep and chicken. To the immediate north of this was a sub-oval pit (106) with almost vertical sides. Based on limited pottery finds, the feature post-dates the 14th century; it also contained a rectangular iron buckle. A general lack of activity shown during this period may correspond to a more widespread urban decline, locally and regionally.

15th to 16th century

The northernmost pit in the central alignment (133) in the eastern plot was 0.9m deep and 2m in diameter; its finds included small fragments of sheet copper alloy. It was truncated by a group of later pits to the east (138) and south (128, 130), with a small undated pit (135) cutting its north side (Fig. 2, **6**). Based on the pottery assemblage, pit 138 is seen as broadly contemporary, dating from the mid to late 16th century.

Pit 140 lay within the larger group of pits of the eastern alignment and was only clearly seen after excavation of pits 156 and 158. The pottery indicates a late 16th century date and is likely contemporary with the surrounding cluster of pits, namely 154, 156 and 158, which exhibit very similar fills. The presence of specialised drinking vessels within secondary deposition, with a comparative lack of domestic ware, may emphasise the industrial character of the area, in contrast to later phases. Pit 154 contained an iron star rowel spur with eight tapering points.

The southernmost pit of the eastern alignment (146) measured 3.5m wide by 1.5m deep and contained similar fills to the neighbouring pits on the alignment. The animal bone assemblage contained a range of elements from cattle and sheep, a complete bantam chicken, as well as occasional goose or fowl, and dog. This broadly indicated typical domestic food waste, although the inclusion of dog is unusual, and the pottery was again dominated by drinking vessels. Cereal grains, hazelnut shell and legume seeds were also recovered. These hint at the use of crop rotation and foraging to supplement diet with a variety of plant sources. It also contained lead waste in its upper fills.

Cutting pit 165 and the borough ditch on its southern edge, pit 163 had steeper sides and a flatter base than the earlier feature. Pit 161 truncated the southern edge of pit 163 and was steep sided, measuring up to 1m deep at the edge of the excavation area. All three pits contained large quantities of animal bone that was not identified. The two latest pits contained pottery dating to the late 15th or 16th century.

Late 16th century

A small pit (125), south of pit 123, was partially truncated by a 19th-century feature (113). It measured 1.48m wide and 0.5m deep, producing fragments of two dripping dishes. Together with an assemblage of high meat-yielding animal bone, this presented distinct evidence of a shift towards domestic use in the eastern plot by the late 16th century.

Pit 154 lay to the north of the quarry pit (150) in the eastern alignment and measured 1.66m wide by 0.83m deep. A fragment of chafing dish, for use as a portable stove, reiterates domestic function. It cut two pits (156 and 158) that appeared contemporary, though they yielded no diagnostic finds.

The upper fill of pit 175 contained jar and jug sherds dating to the late 16th century. An undated small sub-circular pit (180) truncated its eastern edge.

Late 16th to 17th century

Cutting the northern edge of the quarry pit (150) was a group of intercutting pits of varying sizes that included pits 128, 130 and earlier pit 133. Pit 128 (Fig. 6) measured 2.3m in width by 0.87m in depth and contained two fills, the lower of which (127) yielded an unidentified coin and numerous fragments of animal bone. Butchered cattle bone

FIGURE 6 East-facing section of pits 128, 130 and 133

and elements from the head and foot, as well as dog jawbone, characterised a mixed assemblage not primarily comprising food waste. Pit 130 measured 1.4m in width by 0.82m in depth and contained animal bone of prime meat age showing varied signs of butchery. Occasional gnaw marks indicated discarding of household waste in the plot. The pottery recovered consisted of domestic bowls and drinking vessels, with a fragment of earthenware cistern.

To the immediate north of pit 146 lay pit 152 (Fig. 7), a feature measuring 1.83m in width and with a depth exceeding 1.63m. Excavations beyond this depth were precluded by the height of the adjacent sections. The pit was fairly steep sided and contained one fill (151) which produced the largest quantity of animal bone from any feature on the site. A significant proportion of cattle bone derived from the head and foot, although meat-bearing elements were also present, with the hooves potentially butchered for food. A variety of species and ages was evident, including a rodent, indicating general household waste. Similarly, the pottery assemblage comprised domestic ware dating to the 16th and 17th centuries. The pit also contained a rectangular iron buckle, two copper-alloy pins (one of which had a decorated ball head) and a possible lace chape.

Other Features

The remaining features included an early 19th-century rectangular pit (113) and a tree-throw (115) (Fig. 1). The pit was located towards the centre of the site and lay between the two lines of medieval pits in the eastern plot. It measured 1.7m in width by 2.8m in length and was just 0.2m in depth. Filling the pit was a large amount of bottle glass and fragmented ceramic bottles or jugs. Some of these bore dates of 1827, naming a local Buckingham wine and spirits merchant as the source. Several of the glass bottles were stamped 'IMPERIAL'.

The tree-throw (115) was located north of the borough boundary ditch to the west of the excavation area, appearing on the ground as an irregularly-shaped patch of dark brown silty clay. A section through the feature showed the area to be full of root activity, with a shallow amorphous profile. Some fragments of residual 14th to late 15th-century pottery were recovered with 17th to 18th-century material, along with a small amount of animal bone. These were likely accumulated and mixed within the feature from nearby midden refuse over time

FIGURE 7 East-facing section of Pit 152 within Quarry Pit 150

MEDIEVAL POTTERY
by Paul Blinkhorn

The pottery assemblage comprised 678 sherds with a total weight of c.9.5kg. It dated to the medieval period or later, with the exception of one, small, residual Romano-British sherd.

Each fabric type was given an alphanumeric code prefixed 'F'. Where possible, these were cross-referenced to the conventions of the Milton Keynes Archaeological Unit type-series (e.g. Mynard & Zeepvat 1992; Zeepvat *et al* 1994), or, if not present in that resource, to those of the Oxfordshire types-series (Mellor 1994); the latter are prefixed 'OX'. The following fabric types were noted:

Fabric	**Cross-reference and date**
F205	MS19: Stamford Ware, c AD 900–1200
F300	MS3: Medieval Grey Sandy Wares, mid-11th – late 14th century
F301	OXY: Medieval Oxford ware, mid/late 11th – 14th century
F302	MSC1: Sandy and Shelly Ware, late 11th – mid 13th century
F324	MS9: Brill/Boarstall Ware, AD 1200–1600
F329	MS6: Potterspury Ware, AD 1250–1600
F330	MC1: Shelly Coarseware, AD 1100–1400
F360	MS2: Medieval Sandy Ware, 12th – 14th century
F365	TLMS3: Late Medieval Reduced Ware, mid-14th – early 16th century
F400	OXBX Late Brill/Boarstall Ware, mid-14th – early 17th century
F402	Brill/Boarstall "Tudor Green" Ware, late 15th – mid 16th century
F403	TLMS17: Tudor Green Ware, 15th – early 17th century
F404	PM15: Cistercian Ware, AD 1470–1600
F405	PM29: Frechen Stoneware, AD 1550–1750
F406	Raeren Stoneware, AD 1450–1600 (Gaimster 1997)
F409	PM14: Midland Purple Ware, AD 1450–1600
F416	PM2: Staffordshire Slip-Trailed ware, mid-17th – 18th century
F425:	PM8: Red Earthenware, mid-16th – 19th century
F426	PM13: Midland Blackware, late 16th – 17th century
F1000	PM25: White Earthenware, late 18th – 20th century

The range of fabric types is fairly typical of sites in the region, and shows that there was activity at the site from the later decades of the

11th century onwards. Late Saxon and earlier pottery was entirely absent, other than the residual Romano-British sherd. A single sherd of Stamford Ware was glazed and in Kilmurry's fabric C (Kilmurry 1980, 9) and is of 12th-century date.

Chronology

There was very little activity at the site before the middle of the 13th century, and very little after the mid-17th century until the modern era. There is a small amount of pottery which dates to the late 11th to 12th century, most of which came from the primary fills of the borough boundary ditch (170). Most of the pit groups date to the late medieval or early post-medieval period, which is reflected by the large amounts of pottery dating to the late 15th to mid-17th century, although an earlier quarry pit (150) did produce an assemblage of mid-13th to late 14th century date. The lack of early to mid-13th century pottery suggests this area of the town was not used during the first half of the 13th century.

The occurrence of the major fabrics show a pattern which is broadly typical of sites in the region, with earlier medieval coarsewares gradually replaced by finer glazed wares such as Brill/Boarstall and Potterspury Ware, then common post-medieval wares such as Red Earthenware becoming dominant after the mid-16th century. The degree of residuality is quite high in some phases, particularly from the 15th century onwards. The late 14th to late 15th-century group is quite small, and just over a third of the pottery is residual. The assemblages from the late 15th to mid-17th century are much larger, but have broadly similar levels of residuality, suggesting that there was continuing disturbance of earlier strata during these periods.

Late 11th Century

All the pottery of this date came from the borough boundary ditch, mainly the primary fill of 170. This group comprised small jar body sherds of F300 and F302, along with another from a glazed OXY tripod pitcher. These are typical products of that industry in the mid/late 11th to 12th century (Mellor 1994, Fig. 21). The remaining pottery of this date from the borough ditch comprises two small body sherds of F302.

12th Century – Early 13th Century

Much of the pottery of this date came from the secondary fill of borough ditch 170, and sealed the late 11th-century group in the ditch's primary fill. The slightly later date would appear to confirm the veracity of the date of the group from the primary fill, or at least offer a *terminus ante quem*. It largely comprises fragments of coarseware jars, including four rims. In addition, a single glazed body sherd of an OXY jug with painted brown slip decoration under a green glaze was noted (Fig. 8, **1**). Decoration such as this, on jugs rather than tripod pitchers, was first introduced towards the end of the 12th century (Mellor 1994, 66). The rest of the assemblage came from the quarry pit fill and from made ground, and comprised body and base sherds from jars in F302 and F330.

Mid-13th – Late 14th Century

Pottery of this date occurred in the fills of pits 123, 150, 175 and 178. The assemblages in most of the pits were dominated by Potterspury Ware, which made up nearly half the assemblage. It comprised entirely jars, bowls and jugs, with rim sherds from three jars, one bowl and two jugs. All the assemblages comprised in the main single sherds from individual vessels, with no re-fits noted, and no cross-fits between the contexts. This indicates that all the pottery of this date is the product of secondary deposition, and suggests a period of site clearance and consolidation.

Late 14th – Late 15th Century

Assemblages of this date occurred in pit 110, tree-throw 115 and borough boundary ditch 170. The whole group comprised body sherds, except for a single Brill/Boarstall jug handle, and a jar rim in the same fabric. This, and the small size of the assemblage, shows that there was very little activity at the site during this period.

Late 15th – Mid-16th Century

Pottery of this date came from the fills of pits 106, 138,140, 146, 161 and 163. As before, these consisted of single sherds from individual vessels, indicating they are all the product of secondary deposition and probably originated from different sources. This is a typical group of the period, with Potterspury Ware making up just over half the assemblage by weight, with the rest of the stratified material made up of Brill/Boarstall Wares along with a few sherds of Late Medieval Reduced Ware, and small quantities of specialist drinking vessels in Cistercian Ware and imported Raeren

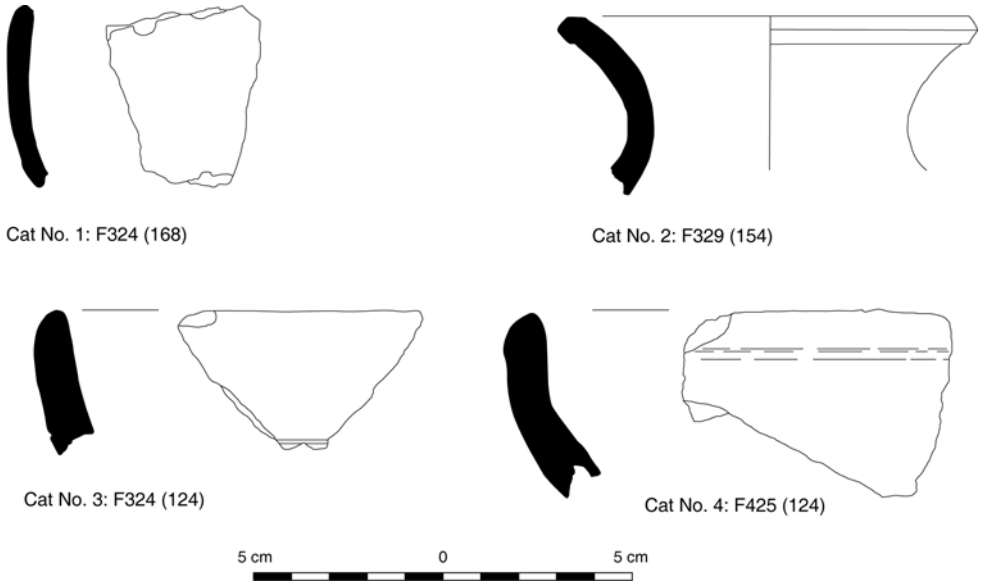

FIGURE 8 Pottery *(reproduction scale 1:2)*

Stoneware. This is reflected in the non-residual rim assemblage, which comprises three Potterspury Ware jars, along with a bowl and a jug in the same fabric. Another jug rim, in Brill/Boarstall ware, was present, as were four cup/mug rims, three of which are Cistercian Ware and the other Raeren Stoneware.

It is worthy of note that specialist vessels associated with the consumption of food, such as skillets, dripping dishes and chafing dishes, are entirely absent. This suggests that the pottery may be indicative of industrial rather than domestic activity, as assemblages with drinking pottery but no vessels associated with food preparation and/or consumption are often found at sites with an industrial component, such as tanneries due to the hard physical nature of the work (e.g. Blinkhorn 2000). Given the fact that pit 175 produced a large number of horn cores, and was capped with a mid to late 16th-century assemblage, this pottery may be a reflection of the area having had an industrial phase during this period.

Mid-late 16th Century

This fairly large group occurred in just three pits (125, 154 and upper fill of 175). As with the groups from earlier contexts, it mostly consists of single sherds from individual vessels, and mainly consists of fragments of jars, bowls, jugs and cups/mugs, although there are sherds associated with the consumption of food. Pit 154 included a fragment of the base of a chafing dish (Fig. 8, **2**), a vessel which could have been used as a portable stove or for keeping bowls of food warm at the table, and pit 125 included fragments of two dripping dishes (Fig. 8, **3**-**4**), specialist vessels for catching the fat falling from spit-roasting meat. This suggests that the site had a more domestic nature by this period.

Late 16th – Mid-17th Century

Assemblages of this date occurred in pits 128, 130, 152 and the borough ditch (2060 from the watching brief). Nearly 40% of the pottery from this phase is residual, with the stratified material comprising late Brill/Boarstall Ware, German Stoneware, Red Earthenware and a few sherds of Midland Blackware. Most of the vessels are fragments of bowls or drinking vessels, which is fairly typical of the period, as specialist cooking pottery was largely being replaced by metal vessels at this time (McCarthy & Brooks 1988, 107). A few fragments of a large Red Earthenware cistern with thick internal lime-scale were also present, but generally the assemblage is once again the product of secondary deposition.

Mid-17th Century – 18th Century
Just two contexts produced pottery of this date, tree throw 115 and pit 2022. Only two sherds were stratified, one from each feature in fabric F416, with the other two sherds, from 115, being residual medieval wares.

19th Century Onwards
Modern pottery came solely from pit 113. The assemblage mainly comprised large fragments of stoneware flagons or 'rum jars', of late 19th to early 20th-century date. Several of these had fragments of retailers' names and addresses on them, all of which appear to have been located in Buckingham.

Illustration Catalogue (Fig. 8)
1. Context 168, fabric OXY. Body sherd from a glazed jug. Hard pale grey fabric, brown painted slip decoration under a green glaze on the outer surface.
2. Context 154, fabric F329. Fragment from the base of a chafing dish. Grey fabric with orange-red surfaces. A few tiny spots of glaze on the inner surface of the base.
3. Context 124, fabric F324. Rim sherd from a dripping dish. Light grey fabric with browner surfaces. Even coating of sooting on the outer surface.
4. Context 124, fabric F425. Rim sherd from a dripping dish. Orange fabric with red inner surface. Orange-green glaze on inner surface.

Discussion
The range of pottery types is fairly typical of sites in the region and in Buckingham itself (e.g. Mynard 1975). It shows that there was largely unbroken pottery deposition at the site from just after the Norman Conquest until the 17th century, although there appears to have been something of a hiatus in the first half of the 13th century, and very little pottery deposited in the century or so following the Black Death. Late Saxon pottery was entirely absent.

All the assemblages appear to be the product of secondary deposition and largely from pit fills. Their somewhat scattered and fragmentary nature suggests that they were incorporated into their place of final deposition as general backfill material for landscaping and site consolidation rather than as primary deposits of refuse. Most of the assemblages are rather too small and secondary to allow much analysis beyond establishing a chronology for them, although the later medieval and early post-medieval material suggests that the site may have changed from an industrial to a domestic use during that period.

The most archaeologically significant groups of pottery would appear to be those from the boundary ditch, represented by cut 170. The small group of sherds from the primary fill (169) consisted of sandy coarsewares and a single fragment of a glazed OXY tripod pitcher, a vessel typical of the mid/late 11th to 12th century (Mellor 1994, Fig. 21). This deposit was in turn sealed by the secondary fill (168) which produced a slightly larger assemblage of again mainly unglazed coarsewares of early medieval date, but also, crucially, a fragment of a slip-decorated, glazed OXY jug which is very likely to be of late 12th to early 13th century date, the period when decoration such as this, on jugs rather than tripod pitchers, was first introduced (Mellor 1994, 66). The lack of Brill/Boarstall Ware from this group, a common pottery type in the region from the early 13th century onwards, and the dearth of early to mid-13th-century pottery from the site generally, suggests very strongly that this date is secure. The group from the primary fill therefore dates to sometime between the mid/late 11th to the late 12th century. The lack of Shelly Coarseware (fabric F330) from that assemblage means that a case can be made that it is indeed of late 11th-century date, but given the small assemblage size, this cannot be advanced with complete confidence.

Roof and Floor Tile
by Paul Blinkhorn

Almost 36kg of roof tile were found, all of it from the burgage plot pit alignments apart from c.1.1kg from the fill of the borough ditch. Only flat tiles were present, with ridge-tiles and glazed examples being entirely absent, as were tiles of Potterspury and Brill types, despite being noted at a number of other sites in the region (e.g. Mynard 1992, 208).

The assemblage was highly fragmented, with just two tiles surviving to a complete width, with one being 158mm, the other 168mm. These are of a similar dimension to the 'red sandy' medieval nib-tiles from the nunnery at Stoke Goldington, Bucks (Mynard 2002, 35). The vast majority of the tiles from this site were of one of two thicknesses, either 11mm or 16mm. Both the tiles which

survived to full width were 16mm types. The dimensions of the thicker examples broadly correspond with the statute of 1477 which stated that roof tiles should have minimum dimensions of 266 x 158 x 16mm (Salzman 1952, 230). Most of the tiles were deposited in groups of late 15th-century date, although a few were noted from features containing pottery no later than the mid-13th to late 14th century. Both peg-holes and nibs were noted. The nibs were exclusively limited to the 16mm thick tiles, which is again very similar to those from Stoke Goldington (*ibid.*), while peg-holes were almost entirely limited to 11mm tiles, other than one 16mm example. All the peg-holes were round, and varied between 9-18mm in diameter.

Seven fragments of floor tile were noted, of late 15th to late 16th-century date. Where complete, thickness ranged between 18-21mm. Three fragments were unglazed, two had spots of a purplish glaze, and another a mottled green glaze. Just one, from pit 152, showed evidence of slip decoration. The fragment was too small to allow any identification of the decorative scheme. They all occurred in burgage plot pits and appear typical of the period.

Faunal Remains
by Jennifer Thoms

A significant amount of bones was retrieved from the excavation. The large quantities of horn cores and skulls initially suggested that the assemblage might represent tanning waste; however, the assemblage turned out to be very unusual in several respects.

Five hundred and ninety-nine identifiable bones were present in the assemblage. There were 318 ribs and vertebrae and approximately two thousand unidentifiable bones. The assemblage contained animals which are not normally found in food waste, such as horse, dog and goat. Often the presence of these species indicates some sort of industrial use of animal remains, for example the making of glue or tanning of hides. In some contexts the preservation of the bones was exceptionally good; for example, pit 146 contained a complete bantam hen, including very delicate body parts such as the beak. Over the whole site, 88% of bones were classified as in good or excellent condition, with those in the ditches being in a poorer state of preservation, showing signs of water damage.

Borough Boundary Ditch

The identifiable bones retrieved from the ditch included high meat-yielding bones from sheep/goat, from animals likely to be at prime meat age. One pig bone was from the lower leg, the third metacarpal, from an animal under two years old, and the other was a fragment of scapula with a dismembering mark near the articulation.

A coracoid bone from a small goose and a complete radius from a dog were the other identifiable bones in this assemblage. The dog bone showed signs of bow-leggedness, being slightly bent and thicker in the centre.

The ditch contained the only two bones that could be positively identified as goat; one was an almost complete horn core, the other a mandible with teeth present. The teeth in the mandible were the second premolar to the second molar, which was erupting, just visible above the bone, indicating an animal aged from 6 to 12 months. There was also a fragment of horn core and an almost complete mandible from a sheep, the latter from a young animal of 2 to 6 months old. Both of these fragments of horn core bore knife marks showing that the horn had been removed, presumably for horn-working.

Further fragments of rib, from medium and large mammals, is inconclusive and most likely represents the use of the ditch for dumping of rubbish. The dumped material seems to have lain around uncovered for a while, occasionally showing signs of having been immersed in water for a time.

Quarry Pit

Most of the bones from the quarry pit (150) derived from a small pony, in the lowermost fill. Along with ribs and vertebrae there was a skull, fragmented but mostly complete, with almost all of the teeth present. The only post-cranial bones present were two phalanges. None of the horse bones displayed butchery marks, but there were marks on two adjacent mandibular incisors which may have been recently made or may be signs that the animal had been skinned. The teeth were very worn, with the incisors worn down to the roots, indicating the horse was very old when it died. The four cervical vertebrae of the pony were also present. Despite the horse's age, there was no sign of arthritis on the vertebrae, nor on the phalanges.

Cattle bone included teeth/mandible fragments, bones from the feet and fragments of radius and metacarpal. These could have derived from one

animal, and the age at death evidence indicates the bones were all from mature animals. No bones displayed butchery marks. It is difficult to speculate on the origins of these cattle bones, being relatively few in number, but the comparative abundance of skull and foot bones, relative to meat-bearing bones, may indicate they are waste from primary butchery.

Bones from sheep and sheep/goat came from a range of elements, with one fragment from a neonatal animal, one from an animal of three years old, and one from an animal younger than three years. One metacarpal showed signs of having been chewed by a dog.

The other species present in this pit were pig, dog and a fragment of chicken femur. The pig bone included three teeth, two fragments of scapula and a fragment of tibia. One scapula had five dismembering marks and another scapula fragment had a chop mark. The dog bones were both mandibles, both contained a molar tooth.

Rib and vertebra fragments from large mammals were present in this assemblage with five of the vertebra being almost or totally complete. These complete vertebrae are likely to derive from the small horse, as might some of the other 'large mammal' sized ribs and vertebrae. Two of the large ribs had butchery marks on them. Six rib fragments and a vertebra fragment from medium-sized mammals were also in the assemblage from this pit; one rib had a filleting mark on it.

In summary, the quarry pit appears to have been used for the disposal of a small, elderly horse. From the retrieved bones it seems that mainly the head, and possibly feet were put in the pit. However, given that the pit was not fully excavated, it is possible that the entire animal was buried. Skulls of pig, dog and cattle were also present, as well as cattle hooves. This preponderance of bones from the skulls and hooves, together with the presence of a horse skull and dog bones, suggests this is not typical domestic rubbish, and dogs and horses rarely appear in domestic refuse dumps. It may be the waste from some sort of industrial process, such as leather tanning.

Pits

13th to 14th-Century Pits

Most of the identifiable bone fragments in pit 175 were from cattle. Most (84%) of these were from the skull, including mandibles, teeth and horn core, with a small quantity from a range of other elements, including the feet. The skull bones were very fragmented and limit an estimate of how many animals are represented. However, the presence of nine complete horn cores indicates at least five animals were present, and the large number of additional horn core fragments informs us that the number was considerably greater.

Six horn cores displayed cut marks near the base, where they join the skull; these marks are typically left when the keratinous horn has been removed from the skull, as would be the case when horn was being used for manufacturing. A range of ages were represented in the assemblage, from at least two young animals aged 1-8 months with others aged 20-28 months, 30-36 months and over 36-42 months. The large quantity of horn cores present, mostly fully grown, indicates that the skulls of several mature cattle had been disposed of in this pit. The large number of skulls, including horn cores in this pit relative to post-cranial bones, suggest it may have been used to dispose of the waste from an industrial process, such as tanning of leather or horn working.

Ribs and vertebrae from large mammals and ribs from medium-sized mammals were also present. Four of the ribs had been butchered, with two displaying filleting marks and another with dismembering marks. The fourth rib had two filleting marks and had been burnt in two places and another rib, unbutchered, had also been burnt.

Pit 178 contained mainly pig bones, where identifiable. Three bones certainly came from the one animal, and the age data available from the other pig bones indicate that all the pig bones may have derived from the one individual. There were no visible butchery marks on the bones, so the possibility that a whole pig was disposed of in this pit should be considered. However, the bones may equally represent the waste from a feasting event, as the absence of butchery evidence does not necessarily mean the animal was not butchered. The other bones in this context were cattle and sheep, all from meat-bearing bones and typical of domestic rubbish.

14th to 15th-Century Pits

Pit 106 contained bone from common domesticates: cattle, sheep and pig. The bones were in good condition, mostly fragmented and one had been sawn

through. More than half of the bones were from the skull, including mandibles and teeth, which would normally typify primary butchery waste; that is, body parts that would be removed from a carcass before it reached the domestic kitchen. However, some meat-bearing bones were also present. Ribs and vertebrae from a large mammal, such as a cow or horse, and vertebrae from a sheep-sized animal were present in this assemblage; none showed any signs of butchery. This assemblage probably comprises food waste.

The fill of pit 110 contained a fragment of sheep radius, a sheep tooth and a radius from a bantam-sized domestic fowl. Rib fragments from a medium-sized mammal and one vertebrae from a large mammal were also retrieved from this pit. The vertebra was unfused, indicating the animal was not fully mature. This small assemblage seems to be food waste.

15th to 16th-Century Pits

The fills of pit 146 contained the excellently-preserved bones of a complete bantam-sized hen, even including the beak. The long bones were unfused, indicating the bird was in its first few months of life. The presence of the very small bones of the feet, together with ribs and vertebrae, suggest that it may represent the disposal of an animal killed by accident or disease, rather than one that had been eaten.

Cattle bones from at least three different individuals included one neonatal, one under 42 months and one older than 42 months. The only signs of butchery were approximately ten filleting marks on a tibia from a young calf. The cattle bones were from a mix of low and high meat-yielding bones, and this mix of body parts and carcasses suggests domestic waste.

Sheep and sheep/goat bones derived from at least four animals, with the age-at-death data and the skeletal elements represented suggesting the bones were food waste, although only one bore signs of butchery. Also present in the pit were bones from pigs, derived from at least two animals, as well as a bone from the wing of a goose, and a fragment of femur from domestic fowl.

Ribs and vertebra from large mammals and sheep-sized animals were retrieved, and one rib fragment may have been from a dog. This mix of animals and body parts is typical of a domestic midden deposit.

Late 16th-Century Pits

Identifiable fragments from pit 125 derived from cattle and sheep/goat. Two of the bones bore butchery marks, three were from high meat-yielding body parts, and the fourth was a tooth. One rib fragment from a medium-sized mammal was also present. These bones are likely to be domestic waste.

Identifiable bones from pit 154 were from cattle, sheep/goat and horse. None of the bones showed any signs of butchery or burning. A neonatal mandible from a calf was one of the few bones from very young animals retrieved from this site. Cattle bones from a young animal, an animal over two to three years old and one over 18 months at death were also present in this assemblage.

The sheep/goat bones were from a variety of elements and from animals aged older than 8 months and less than three years when they died. There were rib fragments from a medium-sized mammal, most probably sheep or goat, and a vertebra fragment from a large, and not fully mature, mammal. The mixed nature of this deposit suggests this is household waste.

Late 16th to 17th-Century Pits

Identifiable bones in pit 128 came from cattle, including a fragment of mandible, a bone from the foot, and a fragment of femur displaying a chop mark. A piece of jawbone from a dog was also present. Dog bones are not usually found mixed in with butchery waste so this may indicate that the pit fills are not standard domestic or primary butchery waste. Fragments of rib and vertebra from cattle/horse and a sheep/pig were also present. This very small assemblage may not represent typical food waste since there is a piece of dog skull present, although the eating of dogs cannot be ruled out, particularly in times of famine.

Bones in pit 130 derived from common meat-producing domesticates. Of the cattle bones, half were from heads and feet, the remainder were from meat-bearing elements. The age-at-death evidence indicates animals at prime meat age, over two years old, and the bones showed signs of being butchery waste, with six displaying marks typical of dismemberment. Pig bones came from the lower leg and the skull, and, one at least was from an animal under two years old. Sheep and sheep/goat bones derived from a mix of high and low meat-bearing bones and there is evidence of

one animal of over 4 years old and one less than three years old. Two fragments showed evidence of butchery and two had been gnawed by a carnivore such as a dog or fox. Fragments of rib and vertebra from cattle/horse and a medium-sized mammal were also present. One rib and one vertebra fragment from the large-mammal sized category displayed dismembering marks. All of the above evidence indicates this pit is filled with household waste.

The fill of pit 152 contained the most identifiable bone fragments of any excavated context. Two thirds of the cattle bones derived from the heads and feet, with the remainder coming from the higher meat-yielding body parts. The latter category bore the greatest number of butchery marks, with 19% of the bones showing signs of butchery, mainly filleting marks. Only 9% of the bones and teeth from the skull were butchered, while 15% of those from the feet displayed knife marks. This may reflect the fact that the hooves of cattle do contain some meat, and in the past they may have been used for food. Three of the phalanges had been burnt. The age data show a range of ages at death from the first year of life to over 4 years of age. The fragmented nature of the cattle bones makes it impossible to estimate how many cattle are represented in the assemblage, but the age data alone indicates at least three were present, with a young and fully mature specimen, plus at least one animal in the 1-3 year age group.

Pig bone came from at least one adult and one animal under a year old. Both a male and a female animal were present, based on evidence of canine teeth. Only one bone displayed butchery marks and there were no other taphonomic indicators, such as gnaw marks or charring. Sheep or sheep/goat bone was present, with at least four animals represented. A high percentage (24%) of the bones displayed butchery marks. Age at death indicated a range of animals from 2-6 months to 4-6 years.

Other animals represented in the assemblage from pit 152 were dog and horse. There were three dog bones, two first phalanges and one canine tooth. The horse bones were a piece of mandible with no teeth present, both sides from the front of the mouth, and one tooth. In addition, bones identifiable to element but which could not be identified positively to species, included two with knife marks; one that had been chopped through, and the other had had a slice removed from the surface, possibly as a result of filleting. A fragment of rodent pelvis, most probably from a rat, was also in this assemblage.

Rib and vertebrae fragments from large (most probably cattle) and medium mammals were identified in this pit, some displaying butchery marks. Eight of the vertebrae had been chopped in half vertically, reflecting the butchery technique used. A rib from a dog/cat was also present in this assemblage, most likely from dog, as three other dog bones were retrieved.

The mixed nature of this deposit, containing the remains of a variety of animals, with several species, elements and ages represented, indicates this pit was used for disposal of general household waste. The rodent bone suggests disturbance of the bones, and that the deposits in the pit may not have been covered over particularly quickly.

Early 19th-Century Pit and Tree-Throw

Pit 113 contained two bones from sheep/goat, one from cattle and one that could only be identified as medium-sized mammal. Little more can be said about this assemblage, other than it most probably represents kitchen waste.

Bones from cattle and sheep/goat were present in the tree-throw (115). A variety of skeletal elements were present and none of the bones displayed butchery marks.

Discussion

The bone from the borough boundary ditch seems to be material that had been dumped, whether from domestic waste or waste from industrial processes. In both cases the assemblages are small and therefore rather inconclusive. The possibility that some of the bones were deposited accidentally, or by dogs or other carnivores, cannot be ruled out, the evidence for this being that the bones in the ditch were in poorer condition than those from the pits.

The pits mainly seem to have contained animal bones typical of domestic, or kitchen, waste but there were three exceptions. Pit 178 may have contained a whole adult pig, possibly a diseased individual, though it may have been eaten and discarded in one feasting event. The large quarry pit (150) and pit 175 may have been used to dispose of the by-products of industrial processes using animal remains, such as horn working or tanning. The quarry pit yielded a complete skull from an elderly pony; the rest of the animal may well

have been present within the unexcavated part of the pit. The pit does not appear to have contained domestic waste, but rather the waste by-product of an industrial process such as tanning. The noxious by-products of this industry would be best disposed of rapidly, at a place distant from human occupation, so filling a large quarry pit would be a good way of doing this. The bones in the quarry pit were in good condition which reflects their rapid disposal. They seem to have been relatively little affected by gnawing or dispersal by rodents or carnivores, with only one bone showing tooth marks. The large proportion of cattle horns and skulls in pit 175, the pit that contained the largest amount of bone, may indicate waste material from an industrial process, such as horn working or tanning.

Environmental Sampling
by Mhairi Hastie

Eleven bulk soil samples from the site were processed. The composition of the cereal assemblage, dominated by free-threshing wheat with lesser amounts of barley and oat, would be typical of a medieval date for southern Britain.

Cereal Grains
High concentrations of charred cereal grains were recovered from five of the samples, particularly from the fills of pits (128, 146, 175 and 178) associated with the burgage plots. Free-threshing wheat varieties (bread/club/rivet wheat), barley and oat were noted, with the majority of grains being recorded as wheat. Other cereal remains were also uncovered, including small amounts of chaff from pit 175 and straw fragments from the fills of four pits (133, 150, 153 and 175). The chaff remains are generally abraded, but where preservation allowed probable bread wheat (*Triticum aestivo*) was identified.

Of note were a number of grains recovered from the fill of a quarry pit (150), which were fused together, suggesting that they may have been wet when they were burnt; a small quantity of these grains were also found to have remnants of chaff/hulls still attached.

Wild Species
A small amount of charred weed seeds representing wild taxa were recovered principally from the fills of pits associated with the burgage plots and from samples containing increased quantities of cereal grains. The weed seeds were generally much abraded, which limited identification, but where preservation was sufficient, seeds of heath grass (*Danthonia decumbens*), fat hen/orache (*Chenopodiace indet*), sedge (*carex sp.*), grass (*Gramineae indet.*), possible trefoil/clover (*cf. Trifolium sp.*) and hoary plantain (*Plantago cf. media*) were noted.

Small fragments of hazelnut shell were recovered from pit fills associated with the burgage plots.

Legumes
A small amount of legume seeds were recovered, the bulk of which were found in the pits associated with the burgage plots. The legume seeds were much abraded and none of the hilums were well-preserved which hindered identification. Legume seeds of varying sizes were noted, with most being less than 5mm in diameter, suggesting that these were vetch/vetchling (*vicia/lathyrus*). Occasional larger pulses were also present: these may be remnants of field pea (*Pisum sativa*).

Wood Charcoal
In general the amount of charcoal was low, although higher concentrations were recovered from four pits (128, 146, 154 and 175). Small-diameter roundwood fragments of oak and scrubby species were present and were likely the remnants of fire/hearth fuel.

Discussion
Little carbonised plant remains were recovered from the fill of the borough boundary ditch. The poorly preserved and fragmentary condition of the burnt material suggests that it had undergone much movement prior to burial and is likely to represent debris accidentally incorporated into the ditch fill, either washed in, dumped with other domestic debris or through bioturbation processes.

A high concentration of carbonised cereal grains was recovered from the fill of the quarry pit (150). Other material recovered from the fill suggests that a mixture of domestic material, possibly midden material, had been dumped into the feature once quarrying had been completed. The cereals from this deposit consisted largely of free-threshing wheat with a small number of oat grains. No chaff remains and only a small amount of weed

seeds were recovered along with the cereals, and it is likely that the assemblage represents cleaned grain. Interestingly, some of the grain was found to be fused together, forming small clusters, and it is thought that this may have resulted from the grain being damp/wet prior to being burnt. Taking this into account, it is thought that the plant material is likely the remains of spoilt grain, which may have been discarded on the fire and any remnants swept up with other domestic debris and dumped into the pit.

A mixture of plant debris was recovered from the fills of a number of pits associated with the burgage plot (128, 133, 146, 152, 154, 175 and 178), including cereal grains, hazelnut shell and legume seeds. In addition, small amounts of cereal chaff and straw were also present. As with the quarry pit, the carbonised plant remains were recovered along with other domestic and industrial debris. The mixture of material from the pits would suggest that accidentally spilled grain burnt in cooking hearths was being cleaned away into the pits along with other rubbish.

The bulk of the grain was identified as free-threshing wheat, although occasional grains of barley and oat were also noted. Evidence from other medieval sites from the midlands and south-east indicates that there was a shift from the principal cultivation of hulled spelt wheat during the Roman period, with it being replaced with free-threshing wheat during the Saxon period onwards. Bread wheat was considered to be the major crop cultivated during this period: however, there is increased evidence to suggest that rivet wheat was also being grown (for example, Moffett 1987, Moffett 1991, Beckley & Radford 2012). Bread wheat would have been principally cultivated for its use in baking, while rivet wheat, which grows on a long straw, has been suggested to have been ideal for thatching (Carruthers 1995). The sparse cereal chaff present in the Market Hill assemblage suggests that at least some of the wheat utilised at the site was bread wheat.

The quantity of oat and barley recovered from the site suggests that neither species was being grown as a major crop: it is thought that both were likely growing as either weeds or relict crops amongst the wheat. It is suggested that both barley and oat were being used as a fodder crop throughout the medieval period (for example Carruthers 2005, Pelling 2012), as a consequence reducing the likelihood of the grains coming into contact with fire, as they would not require to be dried or roasted as part of their processing, and thus are generally underrepresented in the archaeological record for this period.

The quantity of cereal chaff and straw recovered from the samples is low. Given the nature of free-threshing wheat, which is easily separated from the chaff, it may have been processed in the field. The small amounts of chaff and straw recovered from the pit fills could have been brought to the site for other uses, such as fuel for malting kilns (Moffett 1989), damping down cesspits (Pelling undated), thatching, or general bedding and packing material.

Remains of legumes have been uncovered from Saxon/medieval cess material from England, for example at the Deanery (Pelling undated) and St Mary's Stadium, both in Southampton (Carruthers 2005), indicating that peas and beans formed an important part of the diet at this time. None of the legume seeds recovered here could be identified to species level; however, a number of large legume seeds do hint at the presence of field peas. Carruthers (2005) suggests that cultivated peas and beans were probably consumed on a regular basis throughout the year, as they were suitable for both drying and eating fresh. Other evidence suggests that the smaller vetch seeds recovered could have been grown as a fodder crop (Moffett 1991), although the seeds would not require exposure to fire during the processing. Given the relatively well represented number of small legume seeds recovered, particularly from assemblages with increased quantities of cereal grains, it is suggested that in this case the seeds may have been growing as a relict crop amongst the cereals, possibly under a crop rotation system (Carruthers 2005) and brought to the site along with the harvested grains.

The small amount of weed seeds present in the pit fills were principally from plants commonly associated with grassland areas, including trefoil/clover, hoary plantain and heath grass. The material was likely collected with straw, hay or other cut vegetation and became accidentally charred and mixed with other domestic rubbish.

Discussion

The earliest phase on the site is represented by the early Norman period boundary ditch. Notably,

there are no medieval or early post-medieval features north of the ditch, distinguishing this as the line of the medieval borough boundary. This line is shown on the 1900 Ordnance Survey map as the town district boundary and roughly follows the 300ft contour. The pottery assemblage present within the lower ditch fill provides a *terminus post quem* of the late 11th century for its infilling. The size of the ditch, while presenting an obstacle to movement, is not large enough to form a serious defensive work and may have silted up fairly rapidly, which is unsurprising on such a steep slope. The expansion and imposition of a new boundary is typical of the administrative regime widely implemented by the Normans upon seizing control of major towns and centres. This likely accompanied the construction of a castle by the Giffards, dominating the former urban core (Green & Beckley 2008, 42).

The late Saxon settlement at Buckingham is thought to have extended as far north as West Street. This is corroborated by a lack of features or dateable evidence within the excavations at Summerhouse Hill prior to the late 11th century. Indeed, a marginalisation of the Saxon population may be seen in the expansion of the town to the north and northeast, away from the earlier *burh* now in the shadow of the castle. A new market area outside the former boundary shows a decisive shift of the economic core to the new borough. A strikingly similar scenario is shown in Hereford and reflects a widespread strategy in the construction of Norman castle towns immediately following the conquest (Lilley 2017, 35). Nonetheless, it cannot be discounted that the market place was established earlier, close to lines of communication extra-mural to the Saxon defences. Edgeworth (2007, 98) argues for a relatively smooth transition for the same period in Bedford, emphasising continuity in material culture and the Norman appropriation of administrative and economic frameworks already present.

Haslam (2015, 205) argues that rather than arising from population pressure, the use of narrow, regular burgage plots was a foundational means of organising space within late Saxon *burhs*, citing numerous examples including Oxford and Newport Pagnell. The establishment of Buckingham as a double *burh* is generally dated to AD 913 from an account of Edward the Elder's visit in the *Anglo-Saxon Chronicle*. However, its inclusion in the *Burghal Hidage* has led to the inference of its earlier establishment as a new town in the late 870s, pertinent to the political context of that time and a strategic offensive against Viking forces in Mercia and London (Haslam 2005, 143). Taken together, this posits that spatial organisation within the *burh* of Buckingham may have followed a formalised pattern of burgage plots from an early date. The expansion seen in the 11th century may have largely been superficial with regard to urban planning and economy, utilising similar trade routes, industries and spatial organisation as had preceded the conquest.

It is not clear at what date the burgage plots at Market Hill were laid out, although the presence of the Chantry within the plot to the east of the excavation area suggests a 12th century date for the layout. These burgage plots still persist and are fossilised within the current layout of the town. The arrangement of two lines of pits with a space between is typical of the back plot activity encountered in medieval towns. However, the dating of the large quarry pit may indicate that this arrangement was not formalised until later in the 12th to 13th century. The quarry pit seems to have been backfilled swiftly with industrial debris from leather working along with more domestic material.

Evidence for industrial activity is shown in the animal bone assemblage, recovered from features dated by pottery to the 12th to 14th centuries. Two pits, both with bones indicating industrial waste, potentially predate the quarry pit although any other earlier pits would have been removed by the quarrying. The presence of skull fragments and horn cores from medieval features across the site may indicate how long-lived this industrial activity was. The plots backing onto the borough boundary would have been best suited for disposal of industrial waste and other domestic refuse. Furthermore, a grouping of trades such as leather and horn working may be indicated by the 'specialised distributions of anatomical elements' presented in the earlier pits (150, 175, 178) (Albarella 2004, 145). These crafts would have benefited from being situated close to the market for a source of butchered carcasses, while the noxious fumes from tanning would have necessitated a location at the edge of the borough.

A concentration of industrial activity in this area may also explain the disposal of atypical species, such as dog and a whole pony and pig.

Albarella (2004, 139) notes that horses would only occasionally die in towns and were unlikely to be consumed, instead being dumped in town ditches or other common refuse areas within urban limits. The presence of charred plant remains indicating a more domestic assemblage shows the frequent redeposition of material; cess identified in the evaluation supports this contention of an area of waste disposal.

Notable gaps in the sequence of ceramic deposition occur in the first half of the 13th century and in the century following the Black Death. This absence of activity is perhaps associated with documentary references to the desolation of Buckingham by famine even before the late 14th century, with earlier economic downturns impacting the town due to competition from Aylesbury. From the 15th century onwards, faunal remains and pottery are indicative of domestic meat consumption and refuse. Deposition of mixed refuse is still evident, yet lacks the industrial character of earlier phases. The plots appear to have hosted predominantly domestic activity for the late medieval period.

The alignment of the ditch had been altered slightly by the time of the 1880 OS mapping, to allow for Lord Cobham's pleasure ground to the rear of the *Cobham Arms* public house. The modern boundary wall overlay a shallow ditch identified in the 2009 evaluation that was not closely dated but post-dated the mid-16th century. This shallow feature must have been cut into the top of the infilled borough ditch. The use of the excavation area for domestic refuse stops in the 17th century, likely marking the time at which the area was incorporated into gardens behind the *Cobham Arms* and the personal pleasure grounds of Lord Cobham. The listed summerhouse has been recorded, retained, restored and incorporated into the new development.

Conclusion

This programme of archaeological work has provided evidence for the presence of the Norman borough boundary and the later subdivision of burgage plots within the borough. Industrial activity from leather or horn working was observed in the earliest medieval deposits, moving the date for this activity to earlier than previously thought. The swift establishment of related industries in the localised area may hint at a grouping of specialised crafts, utilising familiar relationships of trade and space. Evidence of activity relating to the late Saxon town was absent. However the shifting of economic focus to Market Hill, immediately outside the Saxon defences, may represent a superficial Norman imposition largely allowing continuity in commerce for laypeople under the new regime.

The dating of the borough boundary ditch to the late 11th century, abutted soon after by burgage plots, anticipates a distinct removal of the economic core to outside the late Saxon settlement, immediately following the Norman Conquest. Subsequent intermittent phases of industrial and domestic activity demonstrate the changing fortunes of the town throughout the medieval period, prior to the landscaping of the pleasure garden in the 18th century.

Domestic use and waste disposal characterised the site in the later medieval period with post-medieval landscaping incorporating the area into a pleasure garden for Lord Cobham in the late 17th century, with the later addition of a summerhouse.

Acknowledgements

The fieldwork and post-excavation work was funded by Weston Homes PLC. Thanks to Buckinghamshire County Council's Archaeological Planning Officers who provided advice throughout the project. The fieldwork was led by Phil Mann.

Bibliography

Albarella U 2004, Meat production and consumption in town and country, *in* K Giles & C Dyer (eds) *Town and country in the middle ages: contrasts, contacts and interconnections, 1100–1500*. Maney Publishing, 131–148

Beckley R & Green D 2008, *Buckingham, Buckinghamshire Historic Towns Assessment Report* (Aylesbury)

Beckley R & Radford D 2012, *Oxford Archaeological Resource Assessment 2011: Anglo-Saxon and Viking*. Available at: http://www.oxford.gov.uk/Library/Documents/Planning/Archaeology%205%20-%20Saxon%20and%20Viking%20Oxford%20(410%20-%201066).pdf (Accessed 09/01/2019)

Blinkhorn P 2000, The Pottery *in* P Blinkhorn &

G Pugh 'Excavation of the medieval waterfront at King Stable Street, Eton, Berkshire' *Oxford Archaeol Unit Occ Paper* **7**, 19–24

Carruthers WJ 1995, Charred Plant Remains from the Medieval Farmstead at Ecweek, Avon, *Ancient Monuments Lab Rep* **27/95**

Carruthers WJ 2005, Mineralised Plant Remains, *in* V Birbeck with R Smith, P Andrews & Stoodley (eds), *The Origins of Mid-Saxon Southampton: Excavations at the Friends Provident St Mary's Stadium 1998–2000.* Wessex Archaeol

Edgeworth M 2007, Anglo-Saxon and Medieval Bedfordshire, *in* M Oake, M Luke, M Dawson, M Edgeworth & P Murphy (eds) *Bedfordshire Archaeology, Research and Archaeology: Resource Assessment, Research Agenda and Strategy* (Bedford), 87–118

Gaimster D 1997, *German Stoneware* (British Museum Publications)

Haslam J 2005, King Alfred and the Vikings: Strategies and Tactics 876–886 AD, *in* S Semple (ed.), *Anglo-Saxon Studies in Archaeology and History* **13**. Oxford University, 121–53

Haslam J 2015, The Landscape of Late Saxon *Burhs* and the Politics of Urban Foundation, *in* CP Biggam (ed.), *The Material Culture of the Built Environment in the Anglo-Saxon World*. Liverpool University Press, 181–215

Kilmurry K 1980, The Pottery Industry of Stamford, Lincs. c.AD850–1250, *Brit Archaeol Reps, British Series* **84**

Lilley KD 2017, The Norman Conquest and its Influences on Urban Landscapes, *in* DM Hadley & C Dyer (eds), *The Archaeology of the 11th Century.* Taylor & Francis, 30–56

McCarthy MR & Brooks CM 1988, *Medieval Pottery in Britain AD900–1600 (*Leicester University Press)

Mellor M 1994, Oxford Pottery: A Synthesis of middle and late Saxon, medieval and early post-medieval pottery in the Oxford Region, *Oxoniensia* **59**, 17–217

Moffett LC 1987, Charred cereals and other plant remains from the Saxon settlement at Barrow Hills, *Ancient Monuments Laboratory Report* **19/87**

Moffett LC 1989, A burned Medieval grain deposit and some charred plant remains from Iron Age and Saxon contexts at the Prebendal, Aysbury, Buckinghamshire, A*ncient Monuments Laboratory Rep* **25/89**.

Moffett LC 1991, The Archaeobotanical Evidence for Free-threshing wheat in Britain, *in* IE Hajnoilova (ed.), *Palaeothnobotany and Archaeology: IWGP 8th Syposium Nitra-Nove Vozokany 1989,* Acta Interdisciplinaria Archaeologicia **VII**

Mynard DC 1975, The Pottery from Hunter Street, Buckingham, *in* RA Hall, An Excavation at Hunter Street, Buckingham 1974', *Recs Bucks* **20(1)**, 106–20

Mynard DC & Zeepvat RJ 1992, *Great Linford.* Bucks Archaeol Soc Monog **3** (Aylesbury)

Pelling R 2012, *Dowd's Farm, Hedge End, Hampshire (62354) Charred Plant Remains* (Wessex Archaeol)

Pelling R (undated), *The Deanery, Southampton (62123): the Mineralised and Charred Plant Remains* Archaeology Data Service. Available at: http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1023-1/dissemination/pdf/Environmental/SOU1386_62123_Plant_Remains.pdf (Accessed 09/01/2019)

Pevsner N & Williamson E 1994, *The Buildings of England: Buckinghamshire.* Penguin Books.

Salzman LF 1952, *Building in England down to 1540: a documentary history.* Clarendon Press (Oxford)

Thorpe S 2009, *Market Hill, Buckingham: Archaeological Trench Evaluation and Mapping/Topographical Survey.* Network Archaeology Rep **416** (unpublished)

Zeepvat RJ, Roberts JS & King NA 1994, *Caldecotte, Milton Keynes. Excavation and Fieldwork 1966–91.* Bucks Archaeol Soc Monog **4** (Aylesbury)